

WHAT IS CLAIMED IS:

1. An optical head apparatus comprising:

an object lens which condenses light beams onto a recording surface of an information recording medium or  
5 the like which records information therein;

a lens holder which holds the object lens so as to be movable in an optical axis direction of the object lens and a direction parallel to the recording surface of the information recording medium;

10 a magnet having surfaces on which an arbitrary magnetic pole is directed in one direction;

a coil which has coil surfaces, is provided in the lens holder, and generates a force in accordance with a magnetic field from the magnet in order to move the  
15 lens holder at least one of the optical axis direction and the direction parallel to the recording surface;

a magnetic body which reduces transmission of the magnetic field from the magnet which acts on the coil;  
and

20 a support member which supports the lens holder so as to be movable in a predetermined direction.

2. The optical head apparatus according to claim 1, wherein the coil surfaces of the coil are placed in substantially parallel with an arbitrary  
25 magnetized surface of the magnet in an non-operating state.

3. The optical head apparatus according to

claim 2, wherein the coil is an air-core coil provided on an arbitrary side surface of the magnetic body.

4. The optical head apparatus according to claim 2, wherein the coil is a coil obtained by winding  
5 a wire material around the magnetic body with the predetermined number of turns.

5. The optical head apparatus according to claim 2, wherein the coil surfaces of the coil are formed into flat shapes on a sheet medium having a  
10 predetermined thickness.

6. The optical head apparatus according to claim 2, wherein the number of the coil surfaces of the coil is two, and the coil surfaces are provided with the magnetic body therebetween.

15 7. The optical head apparatus according to claim 6, wherein the coil is an air-core coil provided on an arbitrary side surface of the magnetic body.

8. The optical head apparatus according to claim 6, wherein the coil is a coil obtained by winding  
20 a wire material around the magnetic body with the predetermined number of turns.

9. The optical head apparatus according to claim 6, wherein the coil surfaces of the coil are formed into flat shapes on a sheet medium having a  
25 predetermined thickness.

10. An optical head apparatus comprising:  
an optical head which has an object lens which

condenses light beams onto a recording surface of an  
information recording medium or the like which records  
information therein; a lens holder which holds the  
object lens so as to be movable in an optical axis  
5 direction of the object lens and a direction parallel  
to the recording surface of the information recording  
medium; a magnet having surfaces on which an arbitrary  
magnetic pole is directed in one direction; a coil  
which has coil surfaces, is provided in the lens  
10 holder, and generates a force in accordance with a  
magnetic field from the magnet in order to move the  
lens holder at least one of the optical axis direction  
and the direction parallel to the recording surface; a  
magnetic body which reduces transmission of the  
15 magnetic field from the magnet which acts on the coil;  
and a support member which supports the lens holder so  
as to be movable in a predetermined direction;

a photodetector which detects light beams  
reflected on the recording surface of the recording  
20 medium and converts them into an electric signal; and

an information processing circuit which reproduces  
information recorded in the recording medium from the  
electric signal outputted from the photodetector.

11. The optical head apparatus according to  
25 claim 10, wherein the coil surfaces of the coil are  
positioned in substantially parallel with an arbitrary  
magnetized surface of the magnet in a non-operating

state.

12. The optical head apparatus according to claim 11, wherein the coil is an air-core coil provided on an arbitrary side surface of the magnetic body.

5        13. The optical head apparatus according to claim 11, wherein the coil is a coil obtained by winding a wire material around the magnetic body with the predetermined number of turns..

10       14. The optical head apparatus according to claim 11, wherein the coil surfaces of the coil are formed into flat shapes on a sheet medium having a predetermined thickness.

15       15. The optical head apparatus according to claim 11, wherein the number of the coil surfaces of the coil is two, and the coil surfaces are provided with the magnetic body therebetween.

16. The optical head apparatus according to claim 15, wherein the coil is an air-core coil provided on an arbitrary side surface of the magnetic body.

20       17. The optical head apparatus according to claim 15, wherein the coil is a coil obtained by winding a wire material around the magnetic body with the predetermined number of turns.

25       18. The optical head apparatus according to claim 15, wherein the coil surfaces of the coil are formed into flat shapes on a sheet medium having a predetermined thickness.